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|  | **THE HIGHLAND GEOLOGICAL SOCIETY**  Scottish Charity No. SC004427 |

**September 2021**

Dear Members,

We hope everyone is keeping well and with a relatively pleasant summer that you’ve been able to get out and about in the countryside.

As you will know we’ve enjoyed a season of talks held on Zoom and we give thanks to HGS members Peter Reynolds (Underground in Assynt), Andy Moffat (Lewisian-Torridonian unconformity at Clachtoll), Don Stewart (The Enigmatic Grantown Formation) and Alan Thompson (Planning a Field Trip to Shetland and The Ullapool Thrust) who have given up time in completing geology field trip recces and preparing PowerPoint presentations for us. Thanks also go to Dr Mike Simms (Dawn of the Modern World: Life, Death and Rain in the late Triassic) and Dr Cherry Lewis (The Dating Game) for providing lectures.

Anybody wanting to watch recordings of these lectures can do so by emailing Alan Thompson and requesting a link to a talk.

We’ve arranged talks over the coming months. Some talk descriptions still need finalising but this newsletter will give a flavour of the events lined up.

Lectures, at least until Christmas, will continue to be delivered at 7.30 pm using Zoom except that we are hoping to arrange a live meeting for David Jarman’s talk on Wed 8th December. The details for this are still to be completed, and the committee will be keeping the situation under review as the news about the pandemic unfolds.

**Autumn/Winter lectures 2021**

**Wed 6th October, Dr Steven Andrews: *Life and death of Lake Orcadie: tectonics, climate and sediment*.**

During the Middle Devonian (392-384 Ma) a sedimentary basin stretched from the southern coast of the Moray Firth to Orkney and Shetland in the North. This formed part of a wider system of basins that can be traced all the way up the North Atlantic to Svalbard. During the Devonian Scotland occupied a similar latitude to that of Australia today (30 degrees S) and the climate was hot and dry. However, the presence of a Himalayan scale mountain chain which defined the western margin of the basin provided river catchments which fed a vast lake, Lake Orcadie. Regular fluctuations in climate on decadal and millennial scales resulted in cycles of evaporation and re-flooding of the lake, all of which is recorded in the sedimentary record. This presentation will examine what led to the formation of Lake Orcadie, what the sediments that filled it can tell us about the climate and geography of the region at this time and what became of this ancient lake.

**Wed 27th October, Dr Heather Handley, Adjunct Associate Professor, Monash University, Australia: *Forged by fire: Australia’s rich volcanic heritage and future eruption risk*.**

Since the time the dinosaurs died out to human settlement, Australia’s fiery volcanic past has left behind an expanse of volcanoes stretching over 4,000 km down its eastern margin, forming one of the longest continental volcanic belts in the world. This talk will take you on a volcanic tour of Australia. It will explore why Australia has volcanic activity far from present plate boundaries and the active volcanic status of some regions. It will highlight how modern volcano science, integrated with long-lived Indigenous Knowledge of Australia’s volcanic activity, is advancing our understanding of past volcanic eruptions and their impacts. But just how likely is a future eruption in mainland Australia? How much warning time would there be? And how prepared is Australia and its people for a future eruption? All will be unearthed.

**Wed 17thNovember, Alison Tymon BSc**: ***The Geology of the Berwickshire Coast.***

The Berwickshire coast from Cove to Berwick-upon-Tweed exposes sedimentary and igneous rocks spanning the time from the Caledonian collision to the early Carboniferous period. The 400 Ma volcanic rocks at Eyemouth and St Abb’s Head are seen in the cliffs close to spectacular Caledonian folding in Silurian greywackes. The early Carboniferous rocks contain plant, fish and tetrapod fossils, the subject of a recent research project to find out about vertebrates and their environments during Romer’s Gap. The small fishing harbours attract divers to the coastal marine reserve and boats also take geological groups to see Siccar Point as James Hutton saw it in 1788.

Alison Tymon studied geography and geology at Leeds University and taught A-level geology in a Huddersfield sixth-form college and in evening classes for 35 years, alongside active participation in geoconservation and other geological organisations in West Yorkshire and the Scottish Borders. She and her husband Barry now live at Eyemouth and are the authors of a website on the geology of Berwickshire - see <http://berwickshirerocks.org.uk>.

**Wed 8th December, David Jarman, HGS: *The shaping of the Scottish mountains by rock slope failures, with case studies from the NW Highlands*.**

Rock slope failure - RSF - spans rock avalanches, rockslides, and rock slope deformations. In the Highlands today, these are very rare (in bedrock as against superficial deposits) and very small-scale (as at the recent Quoich dam road closure). Yet they have occurred very widely and extensively (reaching 3 sq km), during and after deglaciations. The relict Highland population of over 900 significant RSFs (Jarman and Harrison, Geomorphology, 2019) is scarcely known and little researched, yet has left conspicuous marks on many mountains. RSF occurs primarily in the schists (as the main mountain rock type) but also in Torridonian sandstone - notably Beinn Alligin - gneiss, and even granite. It seems to associate with locales of concentrated erosion in bedrock, such as glacial breaches and trough-heads, rather than on main glen walls. In the NW Highlands, a major cluster occurs in Cluanie-Affric-Kintail. Key sites including Beinn Fhada and Sgurr na Ciste Duibhe will be presented, followed by a lightning tour of numerous examples to give an overall impression of the phenomenon.

**Winter/Spring lectures 2022**

**Wed 19th January, Dr Rachel Wignall, Geology Adviser NatureScot:** ***NatureScot and geoconservation*.**

The role of NatureScot, Scotland’s natures conservation agency, includes geoconservation; so NatureScot is also Scotland’s Geoconservation agency. With legal responsibility for designating and protecting Scotland’s geological and geomorphological Sites of Special Scientific Interest (SSSI), and a remit extending from policy development to public outreach there are many strands to NatureScot’s involvement in geoconservation. This talk will explain the geoconservation data we hold, and some of our past and present work areas, from GCR site selection and site monitoring, to interpretation initiatives, planning consultations, the Scottish Fossil code and the Nature Conservation Order (NCO) for protection of fossils on Skye.

**Wed 9th February, Dr Elsa Panciroli tba**

**Wed 16th March, Dr Tim Lawson tba**

**Field trips 2022**

The only confirmed field trip for 2022 is a self-led excursion to Shetland. Hopefully over the winter we can start building up an outdoor programme. If any member has a suggestion as to where a field trip might take place, and who might be asked to lead it, please let Stephen Young know.

**Shetland Field trip 2022**

We have been able to rebook the Shetland week for 2022, and in summary the plan is as follows:

Wed 1 June. Overnight ferry Aberdeen to Lerwick  
Th, F, Sa, Su 2 - 6 June. 4 nights booked at Bridge End Outdoor Centre  
M, Tu, W 6 - 9 June. Plan to stay 3 nights on Unst, possibly at Saxa Vord if available  
Th 9 June. Overnight ferry to Aberdeen, arriving on the morning of

Fri 10 June

There is a (short) waiting list for places - things will become clearer once the Unst accommodation is resolved.

**Miscellaneous**

**NW Highlands Geopark Ambassador**

HGS has just been accepted as an Ambassador for the NW Highlands Geopark. The scheme appears to have been set up chiefly for local businesses in the North West Highlands, but other organisations such as NatureScot and the Highland Ranger Service have also signed up as Ambassadors. The committee is of the view that this would be a good way for HGS to demonstrate its support for the Geopark, and would be consistent with its second charitable purpose, namely “to foster good relations with organisations having related interests”. The scheme entails a few of our members becoming accredited ambassadors for the Geopark and for this purpose undergoing some training about the Geopark and its work. It has been indicated that our members would be excused that part of the training which covers the geology of the North West (though in practice it might actually be useful to have the Geopark’s “take” on this). If any member is interested in becoming an accredited ambassador, would s/he contact Stephen Young please?

The Geopark’s website has now been updated to show HGS as an Ambassador.

Further information can be found at these links:

[https://www.nwhgeopark.com/ambassador-application-form/](https://emea01.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.nwhgeopark.com%2Fambassador-application-form%2F&data=04%7C01%7C%7C2032d67347f849fb57a008d970611188%7C84df9e7fe9f640afb435aaaaaaaaaaaa%7C1%7C0%7C637664384503247772%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C1000&sdata=Ex7HYTofLwSF7xKfYDZ8Dp9lUfwu4nCHS%2FG5dTQKmfg%3D&reserved=0)

[NWHUGG Supporter and Ambassador Partnership Scheme - North West Highlands Geopark (nwhgeopark.com)](https://emea01.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.nwhgeopark.com%2Fsupporter-and-ambassador-partnership-scheme%2F&data=04%7C01%7C%7C2032d67347f849fb57a008d970611188%7C84df9e7fe9f640afb435aaaaaaaaaaaa%7C1%7C0%7C637664384503257731%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C1000&sdata=eXBoYP8Ttc57hsL2ClI6UWT4pMycIGHCrpAaXllTK4s%3D&reserved=0)

[NWHUGG Supporter and Ambassador Partnerships - North West Highlands Geopark (nwhgeopark.com)](https://emea01.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.nwhgeopark.com%2Fnwhugg-ambassador-partnership-table%2F&data=04%7C01%7C%7C2032d67347f849fb57a008d970611188%7C84df9e7fe9f640afb435aaaaaaaaaaaa%7C1%7C0%7C637664384503257731%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C1000&sdata=TDg1GSr6ngv9i1hKEbQnEhbcJhlMcednujB5Dt%2BfDZQ%3D&reserved=0)

[NWHUGG Ambassador Partnerships - North West Highlands Geopark (nwhgeopark.com)](https://emea01.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.nwhgeopark.com%2Fnwhugg-ambassador-partnerships%2F&data=04%7C01%7C%7C2032d67347f849fb57a008d970611188%7C84df9e7fe9f640afb435aaaaaaaaaaaa%7C1%7C0%7C637664384503267694%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C1000&sdata=ZM%2Bb8YVDaK6T7Ayl6S2UpO%2BTAdVs3HN82sS%2BI2Pey2k%3D&reserved=0)

**Sinclair Ross archive**

Ann and Peter Reynolds, Alison Wright and Dave Longstaff are continuing with their work with a view towards cataloguing Sinclair’s papers for research purposes.

A recent example of his work being helpful to current day projects is the use of his notes and photographs regarding Spey Bay pebbles and coastal erosion which were utilized in the Scottish Geology Festive Pebble day at Speymouth held in September.

**NW Highlands Geopark Zoom lectures, commence 19:30**

see <https://www.nwhgeopark.com/events/list/>

**2021**

Monday 11th October, Andy Moffat, The Building Stones of Inverness.

Thursday 11th November, Tim Lawson, Quinag: Evolution of a Mountain.

Thursday 9th December, Dr Maarten Krabbendam, Torridon and Morar sandstone; detritus from the largest mountain belt on earth.

**2022**

Thursday 13th January, Alastair Mitchell, A Collector’s Obsession with the Highlands Controversy.

Thursday 10th February, Colin McFadyen, Conserving our Geo-heritage with Special Reference to the NW Highlands Geopark.

Thursday 10th March, Dr Adrian Hall, How Glacial Erosion works.

**NW Highlands Geopark activities in person**:

Tuesday 12th October 10.00 – 12.00 Ardmair Beach Pebble Event. Free as part of the Scottish Geology Festival.

Thursday 14th October 14.00 – 16.00 Andy Moffat: Follow up to Monday's talk with a walk through Inverness to view the building stones of the city.

**Scottish Geology Festival**.

The Scottish Geology Trust have a wide range of activities on offer in September running into October**:** <https://www.scottishgeologytrust.org/festival/>

And a selection of recently uploaded videos on YouTube. The video “The Shape of the Coast” describing the Orkney mainland coastline is particularly interesting with spectacular drone footage – see <https://www.youtube.com/results?search_query=scottish+geology+festival>

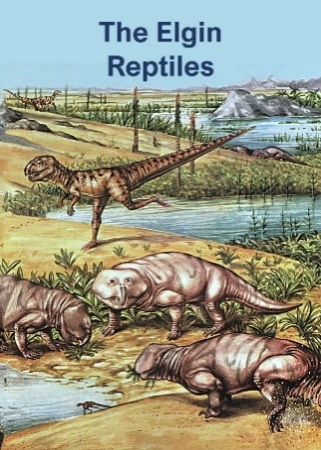
The Scottish Geology Trust also has a further selection of videos on YouTube which are not associated with the Festival – see [Scottish Geology Trust - YouTube](https://www.youtube.com/channel/UCbZCaXA_rsnmB_OZQadegfg)

**Elgin Museum: *At the Water’s Edge* exhibition**.

Elgin Museum’s Geology Group were delighted to welcome visitors to the new exhibition about early tetrapod *Elginerpeton pancheni* when the Museum finally re-opened to the public in August; Covid forced the closure of the Museum in March 2020, just days after the cabinets and display panels for the exhibition had been set up in readiness for the start of the 2020 season.

In support of the *Year of Coasts and Waters*, the exhibition brings together fossils of *Elginerpeton* from three UK institutions as, despite it being named ‘the crawler from Elgin’, no remains from this animal are held in Elgin Museum’s Recognised Collection. The fossils are on loan until the end of November, when the 2021 season will end; the museum is open Saturday and Sundays 1100 -1500 and tickets should be booked in advance. See <https://elginmuseum.org.uk/atwe2020/> for more information.

**Elgin Museum Geology Group**, with the help of Prof. Mike Benton from the University of Bristol, have updated and expanded *The Elgin Reptiles* booklet, which was last reviewed in 1999. Since then, CT scanning of fossil specimens has revealed new information about the animals, resulting in some of them being renamed. Drs Nick Fraser and Davide Foffa at NMS also provided advice, ensuring that the specially commissioned illustrations reflect the latest scientific findings. The 56-page booklet costs £5 and can be purchased from the Elgin Museum shop during opening hours or online: <https://elginmuseum.org.uk/books/>.



**Earth Futures Festival**

Our speaker on 27th October, Heather Handley, is the daughter of an HGS member, Jonie Guest, who died last year. Heather is one of the co-founders of the Earth Futures Festival, of which the Patron is Professor Iain Stewart (of TV renown). The Festival is an international film and video event designed to showcase the important role geoscience plays in addressing our most pressing sustainability challenges, with a focus on education, diversity and inclusion.

Heather writes: “The festival is a two-week online event centred on Earth Day 2022 that will culminate in screening and awards events hosted in Sydney, Paris and New York.

We are looking for professionals and students in the realms of geoscience, the arts and science communication along with community groups, associations, school students and First Nations peoples to submit 90 second to 90 minute works in video format.

Submissions open on the 1st October 2021 and close on 31st January 2022. This year's themes are Dynamic Earth, Future Earth and Human Connection.

FInd out more here: [https://www.earthfuturesfestival.com](https://www.earthfuturesfestival.com/)”.

A copy of the flyer for the Festival is attached at the end of this newsletter.

**Geological websites, online resources**

The NW Highlands Geopark: <https://www.nwhgeopark.com/>

Here is a link to the Angus Miller “Geowalks” website which has 22 talks on Scottish geology for viewing and they’re all recommended. <https://www.geowalks.co.uk/geology-talks/>

Any HGS members with an interest in sedimentology might have a look at the Seds online website <https://sedsonline.com/> which hosts numerous YouTube lectures on the various aspects of the subject. If you like aeolian bedforms, a particularly interesting talk is one given by Dr Nigel Mountney: see - <https://www.youtube.com/watch?v=igLb2EW4Pw0>

The Geologist’s Association has put together an exhaustive list of resources:

<https://geologistsassociation.org.uk/sofageology/>

Geological Society of London lectures and library – see Library and Information Services and Events at [The Geological Society (geolsoc.org.uk)](https://www.geolsoc.org.uk/library)

Palaeocast podcasts:-

<https://www.palaeocast.com/category/mesozoic/>

Other Scottish geological societies’ websites:

Aberdeen Geological Society

<http://www.aberdeengeolsoc.org.uk/>

Edinburgh Geological Society

<https://www.edinburghgeolsoc.org/>

Glasgow Geological Society

https://geologyglasgow.org.uk/

Open University Geology Society

<https://ougs.org/>

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